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Personal and Organizational Variables Related to the Strength of Mentoring Relationships in Nursing

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PERSONAL AND ORGANIZATIONAL VARIABLES RELATED TO THE STRENGTH OF MENTORING RELATIONSHIPS IN NURSING

by

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ABSTRACT

Mentoring is viewed as a viable developmental process for nurses that promotes professional maturation, career satisfaction, and strong, competent leaders. Personal and organizational variables related to mentoring, such as mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee, have been described in the theoretical and research literature. A conceptual model for this investigation was developed which related these variables to the mentors' perceptions of the strength of their strongest mentoring relationship. The purpose of this study was to establish the strength of the relationships delineated in the model. The model was tested on 125 recruited mentors who were randomly divided into two groups: a screening sample of 75 to establish a multiple regression equation and a calibration sample of 50 to cross validate the regression results. Results indicated that mentoring potential was the only significant independent variable and accounted for 18% of the variance in the strength of the mentoring relationship. Cross validation results supported the multiple regression findings. Multiple regression results and content analysis of qualitative data suggested a revised model for future testing with the following independent variables: mentoring potential, professional success, organizational climate, and mentee attributes.

DEDICATION

Writing a dissertation is a long and arduous task which involves commitment and sacrifice from many people. I dedicate this work to my family and babysitter who encouraged me even though it required sacrifices from each of them. Specifically, I dedicate this work to:

Edward Fields, my husband, who believed in me and encouraged me to realize my dreams even when it meant putting some of his career goals on hold.

Lisa and Alison Fields, my daughters, who did not always understand what my dissertation was except that it placed a lot of demands on them and me.

Thorun Hovelsrud, my babysitter, who was always able to fill in when needed.

Without the encouragement and support from these four people, I would not be writing this dedication today.

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CHAPTER I

INTRODUCTION

Problem

The nursing profession needs more effective, successful leaders (Kinsey, 1986) who will continue to practice nursing (Spengler, 1982). Mentoring can be viewed as a means to this end since it is espoused as a viable developmental process for nurses (Spengler, 1982; Werley & Newcomb, 1983) that promotes professional maturation, career satisfaction, and development of strong and competent leaders (Knebel, 1985). The need for nurses to have a mentor has been described for clinical, administrative, research, and academic practitioners. Personal and organizational variables related to mentoring, such as mentoring potential, professional success, organizational climate, and experience as a mentee, have been identified and described in the theoretical and research literature.

Descriptions of a mentor abound. A mentor has been described as a person who is 8 to 15 years older than the mentee with greater experience and seniority in the work world (Burke, 1984; Levinson, 1978). Although personality styles between mentors and non-mentors have not been shown to be different (Alleman, Cochran, Doverspike, & Newman, 1984), mentors do possess a willingness to share their accumulated knowledge with others (Bolton, 1980; Vance,

1982). Fields (1989a) identified three dimensions of mentoring potential: activities and functions, affective qualities, and interactional qualities.

Research has supported the relationship between mentoring and professional success. Results have suggested that lawyers (Riley & Wrench, 1985) and business executives (Roche, 1979; Zey, 1984) who had a mentor during their career development made more money and perceived themselves as more successful than their non-mentored counterparts. Spengler (1982) surveyed nurse doctorates and found that those who had been mentored had a greater sense of accomplishment related to their career goals than non-mentored nurse doctorates. Dalton and Thompson (1986) revealed that success is also related to being a mentor since their data indicated that mentors are successful, high performers.

Organizational climate research has suggested that a climate that encourages communication and joint problem solving leads to supportive relationships among workers (Duxbury, Henly, & Armstrong, 1982; Gray-Toft & Anderson, 1985). Hardy (1984), in an investigation of the careers of leading women nurses in England and Scotland, claimed that nurses work in hierarchical structures which do not encourage lateral communication and team work, both of which are necessary for mentoring to develop. Hardy concluded that the organizational climate of hospitals hinders the development of mentoring relationships since it discourages

effective communication among staff members and deprives subordinates of the initiative and motivation to develop professionally. Other research on mentoring in the United States and Canada has suggested that mentoring exists in nursing (Taylor, 1986; Vance, 1982; White, 1988). More research is needed to investigate the relationship between organizational climate and mentoring.

Mentoring research also has demonstrated that those individuals who had been mentored during their career development functioned as mentors to others more frequently than their non-mentored colleagues (Busch, 1985; Hess, 1986; Spengler, 1982). These findings imply that an experience as a mentee might be an important variable in becoming a mentor.

Most of the mentoring research has been from the mentees' perspectives; few studies have examined the mentors' perceptions of the relationship. In addition, neither the strength of mentoring relationships nor its relationship with personal and organizational variables such as mentoring potential, professional success, organizational climate, or experience as a mentee has been investigated.

Purpose Statement

The purpose of this study was to examine the mentors' perceptions of personal and organizational variables related to the strength of mentoring relationships. The specific variables investigated included the mentors' perceptions of

their mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee.

Conceptual Framework

The supporting theoretical framework for this study came from social cognitive learning theory espoused by Bandura (1986). Within this framework learning is conceptualized as knowledge acquisition through cognitive processing of information. Learning occurs through two processes: response consequences in trial and error experiences or observation in a social situation through modeling.

Trial and error learning through direct experiences is a rudimentary, time consuming, and often ineffective means of learning through repetitive experiences. This process can be abbreviated and errors limited through social cognitive learning.

Social cognitive learning theory acknowledges the social origin of human thought and action while recognizing the contribution of thought processes to human motivation, affect, and action. In this framework human functioning is explained with a triadic model which represents a reciprocal relationship among three dimensions: behavior, cognitive and other personal variables, and environmental events. These three dimensions operate as interacting, though often unequal, determinants of each other. The relative influence

of each one on the others varies. For example, when environmental conditions exercise powerful constraints on behavior, then its effect emerges as the overriding determinant on the learning process. When environmental or situational constraints are weak, cognitive and other personal variables emerge as primary determinants. Therefore, behavior, cognitive and other personal variables, and the environment operate as interlocking determinants of each other. The relative influence of each dimension on the other two differs in various settings and for different behaviors.

Social cognitive learning theory was used to explain the relationship among the variables in this investigation. The behavior investigated was the strength of the mentoring relationship; the cognitive and other personal variables were mentoring potential, professional success, and experience as a mentee; and environment was the immediate organizational climate and the general organizational climate.

Mentoring represents a specific form of social cognitive learning with the purpose of professional socialization and learning for less experienced professionals. The conceptual model derived from social cognitive learning theory and mentoring research suggested that mentoring potential, professional success, immediate organizational climate, general organizational climate, and

experience as a mentee are related to the strength of a mentoring relationship (see Figure 1).

Support for using social cognitive learning theory in the development of this conceptual model was found in several investigations. For example, in a series of experiments in simulated organizations with 60 graduate business students, researchers manipulated the subjects' cognitive knowledge that their organization was either easily or not easily controllable (Bandura & Wood, 1989; Wood & Bandura, 1989a). The subjects were then tested for their management performance with a multi-trial methodology.

The experimental group that operated within a cognitive set that organizations are easily controllable set higher goals for themselves and exhibited more effective analytic thinking. The path analytic results supported social cognitive learning theory by illustrating that a cognitive set of controllability or uncontrollability affected an individual's view of the organizational climate, which in turn affected behavior and performance.

In a separate series of experiments in simulated organizations with 24 graduate business students Wood and Bandura (1989b) manipulated the subjects' cognitive knowledge about their conception of management ability. One group of subjects was told that decision making reflects basic cognitive capabilities and is therefore a stable personal quality that does not change over time with experience. The comparison group was told that

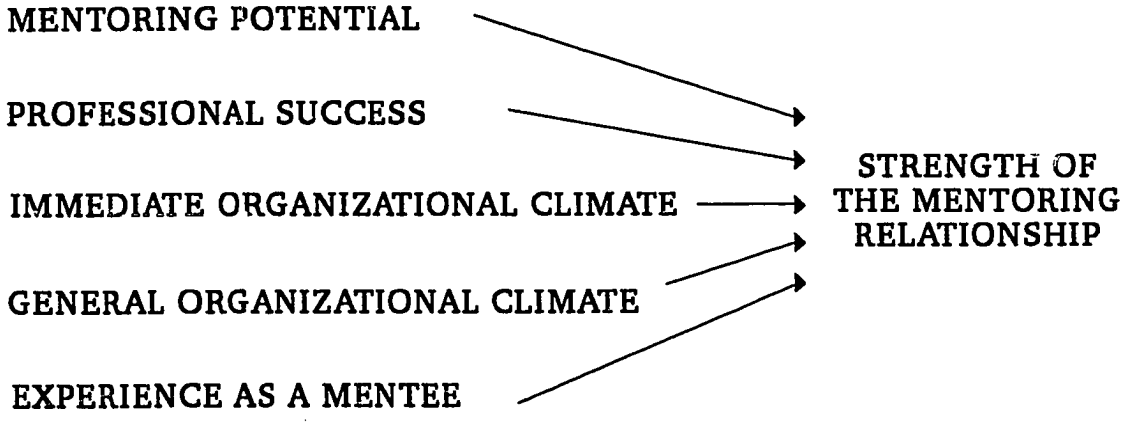

Figure 1. Conceptual Model of the Relationship Between the Mentors' Perceptions of the Strength of the Mentoring Relationship and Mentoring Potential, Professional Success, Immediate Organizational Climate, General Organizational Climate, and Experience as a Mentee.

decision-making skills are developed over time through practice and is therefore an acquirable skill. Subjects were then tested during 18 trials of decision-making simulations at a computer terminal. Research data was collected after trials 6, 12, and 18. The results suggested that the subjects who were instructed that decision-making skills are developed through practice performed at a higher analytic level than the comparison group. A path analysis of the results suggested that the subjects' perceptions of their ability affected their goal setting which in turn affected their subsequent performance. These results also supported social cognitive learning theory by illustrating the relationship between cognitive factors and managerial behavior. This investigation suggested that a person's conception of ability can be either self-enhancing or self-impeding in approaching complex tasks.

Latham and Saari (1979) applied the principles of social cognitive learning theory in an experiment with 100 first-line supervisors in an international company to improve their interpersonal skills with employees. Subjects were randomly assigned to either a training or control group. The training group was given a behavioral training program developed from social cognitive learning theory. The control group was informed that for logistical purposes they would receive the same training at a later date. Results indicated that the performance of the training group was significantly better than the control group immediately

after the training program and 3, 6, and 12 months later. Change in the control group's performance did not occur until after they had the training program. This study supported the integration of both cognitive and behavioral principles within the context of social cognitive learning theory.

Career development among nurse doctorates (Spengler, 1982), nurse educators and clinicians (Novotny, 1983), and nurse educators and nursing service administrators (Hess, 1986) was investigated within a social cognitive learning theory context. The results from these studies were congruent with social cognitive learning theory in that learning occurred as the result of direct experience in which the behavior of more experienced professionals was observed. Through guidance, teaching, career counseling, and observations of the mentors in work settings, the mentees were exposed to new behaviors, which they incorporated into their repertoire.

Although each of these studies tested and supported social cognitive learning theory, they supported the relationship between cognitive and other personal variables and behavior more than the entire triadic model. The current investigation offered an opportunity to study all three dimension: behavior, cognitive and other personal variables, and environmental events.

Research Questions

This study addressed the following research questions:

1. What are the individual relationships between the mentors' perceptions of the strength of the mentoring relationship and mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee?

2. What are the relationships among the mentor's perceptions of mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee?

3. What is the overall relationship between the mentor's perceptions of the strength of the mentoring relationship and mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee?

4. What is the relationship between the predicted and actual scores for the mentor's perception of the strength of the mentoring relationship?

5. What are key variables that facilitate strong mentoring relationships?

Data from the recruited sample of 125 mentors was used to answer research questions one, two, and five. Research questions three and four were answered by randomly dividing the sample into two groups: a screening sample of 75 to establish the regression equation and a calibration sample

of 50 to cross validate the generality of the equation (Pedhazur, 1982; Tabachnick & Fidell, 1983).

Definition of Terms

The definition of terms are as follows:

Mentoring potential. The perception of personal characteristics that enabled the nurse to function as a mentor as operationalized by the Mentoring Potential Scale (Fields, 1989b).

Professional success. The mentor's perception of career achievements during the time the mentoring relationship occurred as operationalized by the Self-Perceived Success in Nursing Scale (Buscherhof, 1988a).

Organizational climate. The mentor's perception of the psychosocial support given by people in the immediate and general work environments during the time the mentoring relationship occurred as operationalized by the Work Environment Support Scale (Buscherhof, 1988a). The immediate work environment included those people at work with whom the subject is in frequent daily contact. The general work environment included those people in the larger organization with whom the subject has less frequent contact.

Experience as a mentee. The mentor's perception of having been taught, coached, and counselled by a more experienced nurse over a period of time in an informal or

assigned relationship as operationalized by the Demographic Questionnaire.

Strength of the mentoring relationship. A mentoring relationship is a special relationship between two adults, with the more experienced one taking a personal interest in and guiding the less experienced person's career. The mentor has qualities and knowledge that the mentee wants to acquire, and the mentee is one in whom the mentor has great expectations for success. The mentor's perception of the strength of the mentoring relationship was operationalized by the Career Support Scale (Riley & Wrench, 1985).

Assumptions

Assumptions inherent in the study included the following:

1. Mentoring is an important developmental process and exists in nursing between a more experienced and a less experienced nurse.

2. The strength of the mentoring relationship is an indication of the effectiveness of the relationship.

3. Perceptions are valid indicators of reality.

4. Mentoring in nursing is similar to mentoring in other disciplines.

Conclusions

Research has supported that mentoring exists in nursing, but none of the studies focused on the mentors'

perceptions of personal and organizational variables related to the strength of mentoring relationships. The personal and organizational variables investigated in this study were the mentors' perceptions of mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee.

CHAPTER II

REVIEW OF THE LITERATURE

This review of the literature includes a discussion of mentoring relationships and the relationships between mentoring and mentoring potential, professional success, organizational climate, and experience as a mentee.

Mentoring Relationships

Kram (1983) proposed a conceptual model of mentoring relationships as the result of a qualitative study on 18 mentoring dyads in corporate executive positions. Mentoring functions were identified as career and psychosocial. Career functions were those attributes of mentoring that enhanced the mentee's career advancement such as providing sponsorship, exposure and visibility, coaching, protection, and challenging assignments. These functions helped the mentee gain valuable knowledge about the organization and profession, which helped with preparation for advancement opportunities. Psychosocial functions were those attributes of mentoring that enhanced the mentee's feelings of competence and sense of identity such as being a role model, friend, counselor, and acceptor and confirmor of the mentee's work and ideas.

Schockett and Haring-Hidore (1985) tested and supported Kram's (1983) model of mentoring relationships in a study that utilized 50-word vignettes to portray either

psychosocial or career functions of mentoring. One hundred forty-four college students rated the vignettes for desirability on each of the functions. The results identified role model, encourager, counselor, and friend as psychosocial functions. Educator, consultant, sponsor, and protector were identified as career functions.

Burke (1984) investigated mentor functions with an instrument designed to measure the extent to which the subjects' mentors demonstrated 15 different mentoring roles and functions. The sample consisted of 80 attendees at management development courses. The results demonstrated three mentoring functions: career, psychosocial, and role model.

In an evaluation of career and psychosocial functions of mentoring in 622 public school administrators, Pavan (1987) demonstrated that psychosocial functions were rated as more important than career functions in men and women. In a comparison between men and women, Reich (1986) demonstrated that although men and women considered psychosocial functions of mentoring relationships important, women assigned a higher value to these functions than men. It was concluded that psychosocial aspects of mentoring relationships were more vital for women than men.

Functions of mentoring relationships in nursing have been identified by several investigators. Using a grounded theory approach with 150 health professionals, Darling (1984) identified three basic functions of a mentor:

inspirer, investor, and supporter. As an inspirer the mentor attracts the mentee by being a positive role model who is enthusiastic and dynamic in communicating an image, goal, or vision of nursing. As an investor the mentor invests time and energy in the mentee. As a supporter the mentor provides emotional support and encouragement which fosters mentee confidence and risk taking. Subsequent research has not tested these findings.

Vance's (1982) sample of leaders in nursing reported that they received career advice, guidance, and promotion; professional role modeling; intellectual and scholarly stimulation; inspiration and idealism; teaching, advising, and tutoring; and emotional support from their mentors. Fagan and Fagan's (1983) sample of acute care nurses reported that they gained self-confidence, technical information, encouragement, information about hospital administration, and how to work more effectively with people from their mentors. Other investigations on mentoring relationships in nursing indicated that the mentor functioned as an encourager, role model, guide, teacher, and sponsor (Hess, 1986; Novotny, 1983; Spengler, 1982; Taylor, 1986). Although these elements of mentoring relationships were not grouped into dimensions by the researchers, they do support career and psychosocial functions. For example, career functions included career advice, promotion, technical information, and role model. Psychosocial

functions included intellectual and scholarly stimulation, inspiration, emotional support, and encouragement.

Although the functions of a mentoring relationship have been delineated and supported through research, no consensus exists about the definition of mentoring relationships. Since the phenomenon of mentoring is not clearly conceptualized, there is confusion as to what is being investigated (Merriam, 1983). The definitions used to identify the existence of mentoring relationships have varied in complexity and depth. Levinson's (1978) research on adult male development revealed that a mentoring relationship is defined by its character and function and not by the formal roles ascribed to it. For example, although a mentor functions as a teacher, guide, role model, and sponsor, the relationship is a deep, personal one that endures for at least 2 to 3 years.

Phillips (1977) identified two types of mentors: primary and secondary. Primary mentors were equivalent to the mentors described by Levinson (1977), whereas secondary mentors lacked the close, personal relationship and were numerous in life. Hardy's (1984) data on nursing leaders in England and Scotland suggested that there are mainly secondary mentoring relationships in nursing and a paucity of primary ones.

In an effort to more accurately define mentoring relationships Bolton (1980) presented a concept analysis of mentoring relationships. Three functional career

relationships emerged: role model/observer, mentor/mentee, and sponsor/protege.

In the role mode/observer relationship the role model enhanced the observer's learning by exhibiting how an activity was to be performed. Often in this relationship the participants did not know each other, and there was no personal contact. In the mentor/mentee relationship an intense personal relationship existed and career guidance was close, personal, and directed toward the mentee. In contrast was the sponsor/protege relationship in which there was a personal distance between the two parties. Although learning took place in a personal relationship, the guidance was not as intense as in the mentor/mentee relationship.

Shapiro, Haseltine, and Rowe (1978) proposed a framework called a patron system which formed a continuum of career relationships that began with peer pals and progressed to guides, sponsors, and mentors. Peer pals were colleagues that helped each other to succeed and progress. Guides, sponsors, and mentors were superiors in a superior/subordinate relationship in which the primary functions differed. For example, a guide was a casual patron who provided valuable information and helped the subordinate avoid pitfalls. A sponsor was a strong patron but was less powerful than a mentor in promoting and shaping the subordinate's career. The most intense patron was a mentor who was paternalistic or maternalistic and powerful in the mentee's career.

In the mentoring research in nursing the definitions utilized did not differentiate between Phillips' (1977) primary or secondary mentors; Bolton's (1980) role models mentors, or sponsors; or Shapiro et al.'s (1978) peer pals, guides, sponsors, or mentors. For example, Fagan and Fagan (1983) simply defined a mentoring relationship as one in which the mentor befriends and guides a less experienced adult. Vance (1977) defined a mentor as a career role model who actively advises, guides, and promotes another's career. Neither of these definitions address the deep, personal involvement Levinson (1978), Phillips (1977), Bolton (1980), or Shapiro et al. (1978) described between mentors and mentees. In an effort to address the personal involvement in a mentoring relationship Spengler (1982) defined a mentor as a special person who has a personal interest in assisting a more junior person to develop professionally and meet career goals. Taylor (1986) claimed that many people are mentors without realizing it. It seems unlikely that a person could have a deep, personal involvement with another person and be unaware of the relationship. Some of Taylor's mentors may have been role models, peer pals, or guides.

Paludi, Waite, Roberson, and Jones (1988) attempted to differentiate between mentors and role models in an investigation of biographic and descriptive data from female graduate students. The results suggested that role models and mentors were differentiated along the dimensions of the duration of the relationship and career advancement. For

example, mentor relationships spanned four to five years and mentors had direct input on career skills and advancement. In contrast, role model relationships lasted only several months and had only indirect input on career skills and advancement.

Although research suggested general consensus that mentoring has primarily career and psychosocial functions, consensus did not exist on the definition, intensity, or strength of the relationship. Conceptual models of mentoring relationships need to be developed and tested to explain the phenomenon.

Mentoring Potential

Although the characteristics of a mentor have been examined, the concept of mentoring potential has not been described or reported in the literature. Burke's (1984) research suggested that not every experienced professional has the desire to be an effective mentor. The data indicated that a mentor has a blending of work commitment with qualities of being approachable, open, sensitive, empathic, supportive, and helpful. Compared to the mentee, the mentor was generally the same sex, 8 to 15 years older, and had greater experience and seniority in the world (Burke, 1984; Levinson, 1978).

Descriptive research on the careers of 550 professionals revealed four career stages: apprentice, colleague, mentor, and sponsor (Dalton & Thompson, 1986).

In the apprentice stage the person is a dependent worker who helps the organization while learning and following directions from a mentor. Success and progression to the colleague stage is evident by the person's ability to function competently as an independent contributor to the organization. Subjects who progressed to the mentor stage were able to assume responsibility to train those in the apprentice stage, and subjects in the sponsor stage shaped the direction of the organization by exercising formal and informal power. The results indicated that most of the sample did not progress beyond the colleague stage. Moving through the stages required successful performance in the previous stage. These findings support previous research in that a mentor is a more senior professional.

Nursing research implied that the age differential might not be as important as the knowledge and expertise differential between the mentor and mentee. Fagan and Fagan (1983) demonstrated that the age differential between the nursing mentoring relationships was less than it was for the police officer and teacher comparison groups. In an anecdotal account of their mentoring relationship, Chamings and Brown (1984) illustrated that a closeness in age was not as important as the knowledge and expertise differential. This information supported the research on career stages in that a mentor was a more advanced professional.

In an analysis of the concept of mentor, Fields (1988a) derived antecedents and defining attributes for a mentor

from the theoretical and empirical literature. Defining attributes included teacher, advisor, sponsor, guide, role model, counselor, coach, protector, and friend. Antecedents included professional experience, older, willingness to share, secure, confident, powerful, knowledgeable, successful, risk taker, and challenger.

Pyles and Stern (1983) identified mentoring relationships called the Gray Gorilla Syndrome in a qualitative study of 28 critical care nurses. The results suggested that some nurses have the potential to be a Gray Gorilla (mentor) because of their experience, expertise, and ability to share in a non-threatening manner with less experienced professionals.

Alleman et al. (1984) attempted to differentiate between managers who are mentors and those who are not in an empirical study of 29 mentoring and 21 non-mentoring dyads. The data demonstrated that personality styles of mentors were not different from non-mentors. What was different between the two groups was what they did, and not who they were; mentors provided activities and opportunities that non-mentors did not. It can be concluded from these results that perhaps the personal qualities of mentors differ from non-mentors, not personality characteristics.

Levinson (1978) conducted in-depth interviews with 40 men to investigate adult male development. The results indicated that a mentor is a mixture of a parent, teacher, and peer, who served as a transitional figure for the

mentee while the mentee moved from childhood to adulthood. The mentor functioned as a teacher, sponsor, guide, role model, and counselor. As a teacher the mentor enhanced the mentee's skills and intellectual development. As a sponsor the mentor facilitated the mentee's professional advancement. The advancement may be done through actual promotions or through added responsibilities in new programs or committees. Bennett (1980) and Hamilton (1981) supported Levinson's finding and suggested that mentors were crucial in enabling mentees to advance to high level management through creation of career opportunities.

As a guide the mentor helps the mentee learn the values, customs, resources, and people in the organization (Zaleznik, 1977). With this knowledge the mentee learns the subtleties of the organization beyond the policy and procedural manual. As a role model the mentee admires and seeks to emulate the mentor. All professionals periodically experience work related stress, and the mentor can act as a counselor and provide moral support. Perhaps the most important role of the mentor is to support and facilitate the realization of the mentee's dream (Levinson, 1978).

Three types of mentors exist: good, good enough, and bad. The good mentor is a combination of the good parent, good teacher, and good friend. In contrast, the bad mentor is a combination of the bad parent, bad teacher, and bad friend. In the middle is the good enough mentor. Although everyone would prefer to have a good mentor and avoid the

bad mentor, most people who have mentors have a good enough one (Levinson, 1978).

In contrast to the findings about mentor characteristics, Darling (1985) identified a group of non-mentors named toxic mentors. Toxic mentors are people who are in a position to function as a mentor but do not have the characteristics of a mentor. Darling identified four types of toxic mentors: avoiders, dumpers, blockers, and destroyers/criticizers. Avoiders were superiors who were generally unavailable and inaccessible to their employees. This type of person often ignored situations in which their help or guidance was needed. Dumpers, in contrast, were superiors who created opportunities for the less experienced but then abandoned them. For example, a dumper may promote a subordinate and then provide inadequate orientation and offer little or no ongoing support to help with the transition to the new position. Blockers were superiors who actively refused to help subordinates by not meeting with them, withholding organizational information, or blocking the person's development through too close supervision. The most toxic type of toxic mentor was the destroyer/criticizer. This toxic mentor undermined the self-confidence of the less experienced professional by giving them responsibilities they were not capable of handling, offering little assistance, and then criticizing them for their poor performance and inexperience. These examples supported Burke's (1984) conclusion that not every

professional had the desire to be a mentor and extended Alleman et al.'s (1984) findings on the differences between mentors and non-mentors.

Bolton (1980) indicated that the most important characteristic of a mentor was a willingness to share accumulated knowledge with the mentee. Vance (1982) reported that mentors must be willing to share their ideas and hopes for the future. Mentors needed to possess generosity towards others and their profession. Without this willingness to share their expertise, an experienced professional could not function as a mentor.

Clawson (1980) stated that the mentor's willingness to share information with the mentee is a key process in the development of young managers. Clawson and Blank (1987) tested 69 superior-subordinate pairs for the interpersonal values of support, conformity, recognition, independence, benevolence, and leadership. The results indicated a significant difference between the pairs for benevolence and independence. The superiors scored higher for independence, and the subordinates scored higher for benevolence. The investigators concluded that the difference might be the result of the subject's position in the organization. Since the superiors were in a higher position, they recognized more independence in themselves, and the subordinates might value benevolence more as a means of compensating for their relative lack of control over their situation. Another interpretation might be that the subordinates valued

benevolence more since they perceived a need for it in their careers. Based on Clawson's (1980) earlier work, a benevolent superior might be perceived as one who is willing to share information and function as a mentor.

It can be concluded that the characteristics of a mentor are well documented in the theoretical and empirical literature. Initial conceptual work on mentoring potential has suggested that it consists of three dimensions: activities and functions, affective qualities, and interactional qualities (Fields, 1989a). The activities and functions dimension includes attributes such as the mentor's perception of success, power, and ability to teach others. The affective qualities dimension includes how approachable, supportive, and interested in others the mentor is. The interactional qualities dimension includes the mentor's interpersonal relations, communication skills, and interest in developing others. Research is needed to measure the relationship between mentoring potential and the strength of mentoring relationships.

Mentoring Relationships and Professional Success

The initial research about mentoring relationships and their benefits began to appear in the business literature in the late 1970s. Roche (1979) surveyed 1,250 business executives who subscribed to Harvard Business Review and the data indicated that those executives who had been mentored were better educated, made more money at a younger age, and

perceived themselves as more successful and satisfied with their careers and work than their non-mentored counterparts.

Zey (1984) sampled more than 100 male and female business executives through an open-interview schedule to capture the depth of the mentoring relationship. The content analysis of the data indicated that the mentored subjects were more successful than the non-mentored group since they held higher management positions and made more money.

Riley and Wrench (1985) surveyed mentoring relationships among 271 women lawyers. The results suggested that those lawyers who had been mentored perceived themselves as significantly more successful than their non-mentored counterparts, which supported the findings of Roche (1979) and Zey (1984).

But neither Roche (1979), Zey (1984), nor Riley and Wrench (1985) examined success in mentors. In a grounded theory approach Dalton and Thompson (1986) interviewed 550 professionals (scientists, engineers, accountants, and university professors) to determine why some professionals remain high performers throughout their careers and others do not. The results demonstrated four successive career stages: apprentice, colleague, mentor, and sponsor. High performers moved through each of the stages, whereas low performers rarely progressed past the colleague stage. The mentor is a successful professional who makes contributions to the profession beyond the immediate work group. For

example, a mentor is involved in decisions affecting a broad group within the organization or profession and interfaces with other professionals at various levels.

In the nursing research on mentoring relationships, success was not identified as a variable. It is interesting to note that the highest incidence of mentoring occurred in the nurse influential samples (Kinsey, 1986; Vance, 1982). If being influential at a national level is considered an indication of success, then it can be concluded that mentoring relationships are related to success in nurses since the most successful nurses had the highest incidence of mentoring.

Spengler (1982) surveyed 501 nurse doctorates in an effort to describe the characteristics and frequency of mentoring relationships. A comparison between mentored and non-mentored subjects indicated that the mentored subjects followed a definitive career plan more frequently, were more satisfied with their career progress, and had a greater sense of accomplishment related to their career goals. The results did not indicate any differences between the two groups for research or other scholarly activities. Since the sample included only nurse doctorates, it might be concluded that the entire sample valued scholarly achievements, which were not affected by the presence of a mentor. The results of this study can be interpreted as supporting previous research that indicated that mentored professionals perceived themselves as more successful than

their non-mentored counterparts. Hess (1986) surveyed 56 nurse educators and 66 nurse administrators in a replication of Spengler's (1982) investigation. The results supported Spengler's findings except that there was no difference between the mentored and non-mentored groups for career planning since neither group reported a preplanned, sequential, career path.

These findings with different populations suggested that being mentored and functioning as a mentor were related to professional success. If professionals who have been mentored perceive themselves as more successful than their non-mentored colleagues, and if mentored professionals are more likely to mentor others, then it might be concluded that mentors perceive themselves as more successful than non-mentors. The relationship between the mentor's perceptions of professional success and the strength of the mentoring relationship has not been investigated.

Mentoring Relationships and Organizational Climate

Organizational climate is a perception individuals have about their work environment (Krampitz & Williams, 1983) and refers to stable characteristics that influence their behavior in the organization (Forehand & Gilmore, 1964). Halpin and Croft (1962) likened organizational climate to the personality of an organization; personality is to individuals as climate is to organizations.

Field and Abelson (1982) proposed that organizational climate was an objective perceptual phenomenon that individuals have of the general organization and subgroup. Organizational climate has three levels: organizational, group, and psychological. Organizational climate exists as a perceived attribute of the entire organization, whereas group climate is a perceived attribute of the more immediate work climate. Psychological climate exists as an individual attribute. The individual worker develops a perception of each of these climates. Although psychological climate always exists within an individual, group and organizational climate emerge only when individual workers develop a consensus about the climate. When the three climates coexist, group behavior is influenced by the interaction of group and organizational climate with the individual's psychological climate.

Krampitz and Williams (1983) investigated organizational climate in two schools of nursing. The results demonstrated that the administrators and faculty perceived their group climates differently. These results suggested that within one organization, several different climates can coexist.

Chew and Teo (1989) supported the existence of different climates in one facility in a study of 400 employees in a large department store in Singapore. The results suggested that organizational climate perceptions

are a function of a subject's position or occupation and not their age or length of service in the facility.

In an analysis of the organizational climate from 1,151 respondents in 71 schools, Halpin and Croft (1962) developed a typology of six organizational climates that are characterized by social interactions: open, autonomous, controlled, familiar, paternal, and closed.

The open climate described an energetic organization moving toward goal attainment. The organizational members were satisfied, and both the members and leaders functioned in leadership roles. Both task achievement and social needs were met.

In the autonomous climate the leader exerted little control over the group members, and the group members emerge as the primary leaders. Although there was satisfaction from task achievement, more satisfaction was gained from social interaction.

The controlled climate was task-oriented and impersonal. The group exerted little attention to social satisfaction and expended most of its energy on task accomplishment.

The familiar climate was highly personal although not very task oriented. Therefore, the members satisfied their social needs at the expense of the task demands, and satisfaction was gained through social interaction, not goal or task completion.

In the paternal climate the assigned leader constrained leadership activity among the group members and acted as the primary leader. Leadership skills were not developed within the group, and little satisfaction was obtained from either social interaction or task accomplishment.

In the closed climate there was apathy among members and the leader. Satisfaction did not occur from social interaction or task accomplishment. In this type of climate the organization seemed to be stagnant.

The tenets of mentoring are most congruent with an open climate since both task and social needs are met. If mentoring relationships have career and psychosocial functions (Kram, 1983; Schockett & Haring-Hidore, 1985), then they need to occur in a climate that facilitates these functions.

Hardy (1984) investigated the career histories of 36 leading female nurses in Scotland and England. Although the results indicated the sample had been mentored, the ability for them to mentor others was hampered by the type of organization in which they practiced. Many of the nurses in the sample worked in a climate that did not encourage professional and personal sharing and growth, lateral communication, or teamwork. It was concluded that nurses had not been socialized to share knowledge with each other, and that the work climate did not support a creative, sharing environment. Hardy's research supported the open

climate (Halpin & Croft, 1962) as the ideal climate for the development of constructive mentoring relationships.

Research has suggested that organizational climate was a perception of the group members and varied with the immediate and more general environment. Research is needed to measure the relationship between the mentor's perception of organizational climate and the strength of the mentoring relationship.

Mentoring Relationships and Experience of the Mentor as a Mentee

Several investigators have suggested that there is a positive relationship between being mentored and mentoring others. Busch (1985) surveyed 537 professors in graduate schools of education and the results indicated that those professors who had been mentored were more likely to mentor others. In Spengler's (1982) sample of nurse doctorates, 89% of the mentored group and only 73% of the non-mentored group were mentors to others. Hess (1986) demonstrated that 79% of the mentored group and 45% of the non-mentored group were mentors to others. Other researchers also reported a positive relationship between being mentored and mentoring others (Fagan & Fagan, 1983; Vance, 1982; White, 1988).

Although there is tentative evidence that suggests a positive relationship between an experience as a mentee and functioning as a mentor to others, research has not examined the relationship between the mentor's perception of the

existence of this experience and the strength of the mentoring relationship.

Conclusions

The review of literature presented research on mentoring relationships, mentoring potential, organizational climate, experience as a mentee, and professional success. Some studies described the relationships between mentoring and success and between mentoring and experience as a mentee. Although some studies investigated the mentors' perceptions of the relationships, no studies were revealed that examined the relationships among the mentor's perception of the strength of the mentoring relationship, professional success, mentoring potential, organizational climate, and experience as a mentee. This study examined these relationships as an initial step to facilitate mentoring relationships in nursing.

CHAPTER III

METHODOLOGY

A descriptive multiple correlation survey design was used to examine the relationships among the mentors' perceptions of the strength of the mentoring relationship, mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee. The stability of the generated regression equation was tested with a cross-validation procedure.

Date Collection

Approval was obtained from the University of San Diego's Committee for the Protection of Human Subjects. Subject recruitment efforts included personal solicitations and distribution of written notices requesting volunteers. A copy of the notice was included in the local Sigma Theta Tau newsletters.

The written notices announced that mentors were needed to participate in a study to examine personal and organizational factors related to the strength of mentoring relationships. The notice explained the time commitment involved (15 to 30 minutes) and a statement that participation provided valuable information about mentoring, which could enhance mentoring relationships in nursing.

Attached to the notices was a stamped, addressed postcard to be completed with the subject's name, address, and phone number, so the research materials could be mailed (see Appendix A).

Volunteer subjects were sent a cover letter, informed consent form, Demographic Questionnaire, and research instruments. The cover letter thanked the subject for volunteering to participate in the study, introduced the investigator, and described the purpose of the study. The letter also explained what was required to participate in the study and how and when research measures were to be returned. To encourage prompt return of completed research materials, the return due date was set at approximately 3 weeks after the materials were mailed to the subject (see Appendix B).

The informed consent form gave permission for the investigator to use the participants' responses in the data analysis. The form outlined the responsibilities of the participant and included statements about the voluntary status of participating, lack of compensation for participating, anonymity of responses, risks, and how to contact the investigator for questions about the study (see Appendix C). Research materials were returned in a stamped, addressed envelope, and upon receipt, the signed consent forms were separated from the questionnaires.

Pilot Study

Nine registered nurses who perceived themselves as having functioned as a mentor served as subjects in a pilot test of the data collection procedure. The subjects were instructed to complete the research materials as if they were a research subject and then answer three questions: Could you understand the directions? How long did it take to complete everything? Do you have any other comments?

Answers to the questions were written directly on the forms and returned to the researcher. After reviewing suggestions and criticisms, necessary directions were revised and subject recruitment began.

Sample

One hundred twenty-five female registered nurses who perceived themselves as having functioned as a mentor were recruited from regional professional meetings in Southern California, the University of San Diego School of Nursing, and members of two Sigma Theta Tau chapters. The majority of subjects resided in Southern California.

Tabachnick and Fidell (1983) recommended a minimum of 4 or 5 subjects per independent variable, but an ideal of 20 for a multiple regression study. Since there were five independent variables (immediate organizational climate, general organizational climate, professional success, mentoring potential, and experience as a mentee) and one

dependent variable (strength of the mentoring relationship), the minimum sample size was calculated as 20 to 25 with an ideal of 100.

Since multiple regression maximizes chance associations and may generate findings that vary across samples, cross validation is suggested to permit an evaluation of the stability of the results across samples (Pedhazur, 1982; Prescott, 1987; Waltz, Strickland, & Lenz, 1984). In this procedure a regression analysis is performed on the first or screening sample. Next the resultant regression equation is used to predict a score on the dependent variable in the second or calibration sample. Then a correlation coefficient is calculated between the actual and predicted dependent variable scores. The results indicate the amount of variance the regression equation explains in the dependent variable on a separate sample.

When it is not feasible to obtain two separate samples, the existing sample can be randomly divided into two sub-samples (Waltz et al., 1984). In this study a computer-generated random sample of 75 cases was elicited for the screening sample. The remaining 50 cases were used for the calibration sample.

A post hoc power analysis to determine the adequacy of sample sizes at the .05 significance level was performed according to the procedures described by Cohen (1988). The power for the multiple regression analysis for the screening sample (n = 75) was 93%. This figure was computed with an

effect size (L) of 19.32 and five independent variables. The power for the bivariate regression analysis was 98% and computed with an effect size (L) of 16.06 and one independent variable.

The power for the calibration sample (n = 50) was 93% for the multiple regression analysis and computed with an effect size of (L) of 21.56 and five independent variables. The power for the bivariate regression analysis was 99% and computed with an effect size (L) of 22.56 and one independent variable.

Munro, Visintainer, and Page (1986) recommended a power of at least 80%. It was concluded that the sample size for the screening and calibration samples were adequate.

Subjects ranged in age from 27 to 75 years (M = 44.12, Mdn = 42.5, SD = 9.2) and had been registered nurses for 3 to 52 years (M = 21.13, Mdn = 19, SD = 9.97). They actively practiced nursing from 2 to 49 years (M = 17.32, Mdn = 15, SD = 9.67) in a full-time position and 67 (53.6%) of the nurses never worked part time. The nurses who worked part time did so for only a portion of their career (M = 5.6, Mdn = 5, SD = 3.78). The subjects had worked in their nursing position from 1 to 42 years (M = 6.7, Mdn = 5, SD = 6.2) prior to their strongest mentoring relationship.

The majority of the sample continued with professional education beyond the original nursing program. For example, although 48 (38.4%) were educated initially at the diploma level, only 3 (6.3%) did not continue with a higher degree.

Specifically, 44 (91.7%) of the diploma graduates attained at least a bachelor's degree, and of this group, 24 (50%) earned a master's degree in nursing, 5 (10.4%) a master's degree in another discipline, and 9 (18.8%) a doctoral degree. Similar trends toward higher degrees were found for the associate and bachelor degree subjects. At the time of this investigation only 3 (2.4%) nurses had a diploma, 3 (2.4%) an associate degree, and 18 (14.4%) a bachelor's degree in nursing, while 64 (51.2%) had a master's degree in nursing, 14 (18.4%) a master's degree in another discipline, and 23 (11.2%) a doctoral degree.

The sample worked primarily in acute care facilities ($\underline{n}$ = 65, 52%) and schools of nursing ($\underline{n}$ = 36, 28.8%). The focus of their positions was patient care ($\underline{n}$ = 29, 23.2%), administration ($\underline{n}$ = 29, 23.2%), student education ($\underline{n}$ = 31, 24.8%), and research ($\underline{n}$ = 6, 4.8%) although some of the acute care nurses worked in patient education ($\underline{n}$ = 5, 4%), and staff education ($\underline{n}$ = 18, 14.4%) positions.

The sample varied on their original nursing program, highest degree attained, focus of position, and type of facility in which they worked. Analysis of variance was evaluated with the SPSS^{X} Oneway program between these sample variations and mentoring potential, professional success, immediate organizational climate, general organizational climate, experience as a mentee, and the strength of the mentoring relationship. Results indicated significant

differences ($p \leq .05$) between the focus of position and general organizational climate (see Table 1).

Focus of position categories were recoded for the analysis of variance to collapse smaller categories. The new categories were patient caregivers and educators ($n = 32$), staff and student educators ($n = 47$), and administrators ($n = 29$). Researchers ($n = 6$) were not included in this analysis. Although there were unequal sample sizes, Cochrans C and Bartlett Box tests supported homogeneity of variance at the .05 significance level. A Scheffe procedure identified that staff and student educators viewed their general organizational climate significantly more positively than the administrators. There were no significant differences among the other combinations of positions.

Other demographic data revealed that 43 (34.4%) of the sample currently have a mentor, 108 (89.4%) had a mentor at some time during their career, and 69 (55.2%) are currently mentors to others. Ninety-four (75.2%) responded that they currently had time to mentor another nurse although 114 (91.2%) indicated that they hoped to be a mentor in the future.

Instruments

The Demographic Questionnaire asked for personal and organizational data to determine the representativeness of the sample. For example, information was requested about

Table 1

Differences Among Groups for General Organizational Climate

			Analysis of Variance					
Focus of Position	M	SD	Source	df	SS	MS	F	p
patient care givers and educators n = 32	40.68	5.50	between grps	2	561.89	280.94	5.38	.006
staff and student educators n = 47	42.39	8.37	within grps	103	5378.49	52.22		
administrators n = 29	36.79	6.86						

the subject's age, original nursing program, highest degree held, years of experience as a registered nurse, and type of employment. Open-ended questions asked the subjects to identify key variables that facilitated strong mentoring relationships (see Appendix D).

A panel of three experts on mentoring reviewed the Demographic Questionnaire for validity of content in relationship to the research questions. Reliability was determined by comparing the stability and consistency of answers to the demographic questions between the pilot and research samples.

Specific self-report instruments measured the mentor's perceptions of mentoring potential, professional success, immediate organizational climate, general organizational climate, and the strength of the mentoring relationship.

Mentoring Potential Scale (MPS)

Mentoring potential was measured with the MPS (Fields, 1989b) (see Appendix E). The scale was developed from a qualitative study and theoretical and empirical considerations.

The content validity index of the instrument was reported as .90. Construct validity with a multi-trait-multi-method approach indicated convergent validity with the Measuring Mentoring Potential (Darling, 1984) of .57 and descriminant validity with the Management Style Index (Ross, 1980) of less than .08. The reliability analysis for

internal consistency revealed a Cronbach's alpha of .93 (Fields, 1988b). The results from the current sample indicated an alpha of .92.

The MPS is a 30-item rating scale that contains a list of descriptors with items such as easily approachable and supportive of others. Subjects were instructed to rate how they felt others would rate them on the items. Since none of the 30 items were reverse scored, item numbers 6, 14, 19, 27, and 32 were added to the instrument but not included in the data analysis so as to prevent a response set bias. Each item was evaluated with a rating scale of 1 to 5 (1 = not very descriptive, 5 = very descriptive). Scoring yielded a summated mentoring potential score with a range of 30 to 150. A high score indicated high mentoring potential.

Self-Perceived Success in Nursing Scale

Professional success was measured with the Self-Perceived Success in Nursing Scale (Buscherhof, 1988a) (see Appendix F). This scale was developed from a qualitative study and incorporated extrinsic characteristics of success such as income, autonomy, and level of position with more intrinsic characteristics such as giving a high level of patient care, reaching one's goals, and being able to effect change.

The author of the instrument consulted experts on success in nursing to analyze the items for content validity. No content validity index was generated. The

reliability analysis for internal consistency revealed a Cronbach's alpha of .88 (Buscherhof, 1988b). The data from the current sample indicated an alpha of .83.

The instrument is a 13-item rating scale in which subjects rated each item on a continuum of 1 to 10 (1 = beginning level of professional nursing and 10 = top level of professional nursing). Scoring yielded a summated success score with a potential range of 13 to 130. A high score indicated success in nursing.

Work Environment Support Scale

Organizational climate was measured with the Work Environment Support Scale that measured both immediate and general organization climates (Buscherhof, 1988a) (see Appendix G). This instrument, developed from theoretical considerations, is not job specific and was tested on staff nurses, nurse administrators, and other nursing personnel (J. Buscherhof, Personal Communication, November 21, 1988).

The author of the instrument consulted experts in nursing organizational climate to analyze the items for content validity. No content validity index was generated. Reliability analysis for internal consistency revealed a Cronbach's alpha for the immediate climate of .95 and .97 for the general climate (Buscherhof, 1988b). The data from the current sample indicated an alpha of .92 for the immediate climate and .86 for the general climate.

The tool is a 16-item rating scale in which the subject rated the psychosocial work climate from 1 to 4 (1 = not true at all, 4 = very true). Scoring yielded a separate summated score for each climate with a potential range of 16 to 64. A high score indicated an open, supportive climate. The rating was done separately for both the immediate and general climate. Items included aspects such as trust, support, and amount of encouragement.

Career Support Scale

The strength of the mentoring relationships was measured with the Career Support Scale (Riley & Wrench, 1985) (see Appendix H). This instrument was developed from a content analysis of theoretical and empirical studies on mentoring to quantify the existence of a mentoring relationship. The author of the instrument consulted experts on mentoring to analyze the items for content validity. No content validity index was generated. Reliability testing of the instrument indicated a Cronbach's alpha for internal consistency of .92 (S. Riley, Personal Communication, October 24, 1988). The data from the current sample indicated an alpha of .82).

The tool is a 29-item rating scale that is divided into two sections. Individual items described characteristics of an intense mentoring relationship and addressed both career and psychosocial functions.

In the first section subjects rated how often they provided their mentee with various types of help from 1 to 5 (1 = never, 5 = extremely frequent). Examples included items such as provided advice, helped in planning this person's career, and served as a role model.

In the second section subjects rated descriptors of the relationship from 1 to 5 (1 = not at all descriptive, 5 = very descriptive). The items in this section elicited information about the respect and admiration in the relationship, value of the relationship, and negative feelings that were aroused.

Scoring yielded a summated score for both sections of the instrument with a potential range from 29 to 145. A high score indicated a strong mentoring relationship.

Data Analysis Procedure

Scores for each of the instruments administered were calculated as previously described. Inspection of the data revealed that six subjects did not complete all of the instruments. Specifically, one subject did not complete the Mentoring Potential Scale, four subjects did not complete the Work Environment Scale for either the immediate or general organizational climate, and two subjects did not complete the Work Environment Scale for the general organization climate. This missing data was not treated for data analysis. Other missing data were isolated and

substituted with that item's group mean score (Tabachnick & Fidell, 1983).

Data analysis was performed on a Vax computer with SPSS^{x} to determine descriptive statistics and bivariate and multiple relationships addressed in the research questions. Research question one (What are the individual relationships between the mentors' perceptions of the strength of the mentoring relationships and mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee?) was answered by evaluating the bivariate relationship between each of the independent variables (mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee) and the dependent variable (the strength of the mentoring relationship) with a Pearson product moment correlation coefficient, a bivariate regression analysis, and a scatterplot.

Research question two (What are the relationships among the mentors' perceptions of mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee?) was answered by evaluating the relationships among the independent variables with a correlation matrix.

Research question three (What is the overall relationship between the mentors' perceptions of the strength of the mentoring relationship and mentoring

potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee?) and four (What is the relationship between the predicted and actual scores for the mentors' perceptions of the strength of the mentoring relationship?) were answered by first randomly dividing the subjects into a screening sample of 75 and a calibration sample of 50 as previously discussed. Next a multiple regression equation was generated from the screening sample and cross validated with the calibration sample (Pedhazur, 1982).

Research question five (What are key variables that facilitate strong mentoring relationships?) was answered by evaluating the quantitative and qualitative data from the Demographic Questionnaire. The quantitative data were correlated with the dependent variable and the qualitative data were analyzed with a content analysis procedure (Waltz, et al., 1984). Reliability and validity of the content analysis was established by the procedures set forth by Topf (1986) and Waltz et al. (1984).

Assumptions for the statistical tests included normality, linearity, and homoscedasticity. It was assumed that the distribution of errors of prediction was independently and normally distributed at all levels of the predicted dependent variable; that there was linearity of relationship between the predicted dependent variable scores and the errors of prediction; and that the standard deviations of errors of prediction were approximately equal

at all predicted levels of the dependent variable (Tabachnick & Fidell, 1983).

The residual scatterplot between the predicted scores and the errors of prediction was nearly rectangular in shape, which suggested that the assumptions were met. The assumption of normality was further tested with a normal probability plot of residuals in which the expected normal values were plotted against the actual values. Inspection of the plot indicated that the assumption of normality was met since the points fell along a generally straight line from the bottom left to the upper right corner of the graph. Since the statistical assumptions were met, variable transformation was deemed unnecessary (Tabachnick & Fidell, 1983).

Threats to Internal Validity

Krathwohl (1985) described internal validity (LP) as the linking power of the internal validity. Threats to internal validity (LP) suggest that there might be other interpretations of the data. Based on the design and methodology of this study, selection, mortality, instrumentation, researcher expectancy effect, and history were rival explanations and, therefore, a threat to internal validity (LP).

Selection and mortality were rival explanations because of the sampling method utilized. The study may have reflected a selection bias. It was not completely possible

to determine how representative those who chose to take part in the study were of mentoring relationships in nursing.

Instrumentation was a rival explanation since the research tools were completed under different circumstances. The researcher had no control over the testing environment, the order in which the measures were taken, or the interruptions that might have occurred during the testing time. It was possible the questionnaires were completed over several sittings.

Instrumentation was also a rival explanation since all of the research tools had limited testing, and two were developed by the same author. For example, although all of the instruments had been evaluated for validity and reliability, these results were generated on only one sample by the author of the instruments. Further application of these instruments beyond their initial use has not been reported. In addition, Buscherhof (1988a) developed and tested both the Work Environment Support Scale and the Self-Perceived Success in Nursing Scale which might have caused an internal bias in the results. The effects from these rival explanations will become more evident after further research on these variables.

History was a rival explanation because events might have happened during data collection which affected the subjects' responses. Journal articles, continuing education programs, television, and other media might have presented information on the variables under investigation.

Threats to External Validity

Krathwohl (1985) described external validity (GP) as generalizing power of a study beyond the study sample. External validity was tested with the cross-validation procedure. Based on the design and methodology of this study, translation generality and reactive effects were rival explanations and, therefore, a threat to external validity (GP).

Translation generality was an alternative explanation since the results came from a recruited sample that may have been biased toward factors affecting mentoring relationships. Without replication it is not possible to determine if the results can be generalized to other nurses or disciplines. Also, since the design was limited to mentors, it was not possible to assess the mentee's effect on the strength of the mentoring relationships.

Translation generality was also effected since the data were retrospective and limited by the accuracy of the mentor's memory and perceptions. Also, the reported relationships were at different mentoring stages. For example, some of the relationships were in existence for several years while others only a few months. Although this situation added to the generality of the findings to all stages of mentoring, it also weakened the findings since newer relationships may not have reached their strongest level.

Reactive effects were an alternative explanation since it was possible that the nurses who chose not to participate in the study did so because of how often they are solicited to participate in research.

Summary

One hundred twenty-five mentors were recruited to examine the relationships between the independent and dependent variables and among the independent variables. The independent variables were the mentor's perceptions of mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee. The dependent variable was the mentor's perception of the strength of the mentoring relationship. Regression equations were generated and cross validated.

CHAPTER IV

RESULTS AND DISCUSSION

The major thrust of this research was to establish the relationship between the mentors' perceptions of the strength of the mentoring relationship and mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee. In addition, data were collected to explore other variables that might facilitate strong mentoring relationships.

Data Analysis Related to the Research Questions

1. What are the individual relationships between the mentors' perceptions of the strength of the mentoring relationship and mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee?

Bivariate linear correlations and regressions between each of the independent variables (mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee) and the dependent variable (strength of the mentoring relationship) were analyzed with the SPSS^{x} Correlation and Regression programs. Correlation results from the 125 subjects indicated that only mentoring potential (r = .50,

$p \leq .000$) and professional success ($r = .27$, $p \leq .001$) were significantly correlated to the strength of mentoring relationships (see Table 2).

Bivariate regression analysis indicated that only mentoring potential and professional success significantly ($p \leq .05$) explained any of the variance in the strength of mentoring relationships. Although professional success was significant, it accounted for only 7% of the variance in the strength of the mentoring relationship. In contrast, mentoring potential accounted for 25% of the variance (see Table 3).

2. What are the relationships among the mentor's perceptions of mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee?

Bivariate linear correlations among the independent variables were analyzed with the SPSS^x Correlation program. Results from the 125 subjects indicated that positive, significant ($p \leq .05$) correlations existed between two pairs of variables: immediate and general organizational climate ($r = .18$, $p \leq .023$) and professional success and mentoring potential ($r = .49$, $p \leq .000$) (see Table 4). Multicollinearity was not considered a problem for subsequent analyses since the correlations were not greater than .70 (Nunnally, 1978). Other correlations among the independent variables were non-significant.

Table 2

Correlation Between the Independent Variables and the Mentors' Perceptions of the Strength of the Mentoring Relationship (N = 125)

Independent Variable	Strength of the Mentoring Relationship r
Mentoring Potential	.50 ***
Professional Success	.27 ***
General Organizational Climate	.08
Immediate Organizational Climate	-.05
Experience as a Mentee	-.07

*** $p \leq .001$

Table 3

Bivariate Regression Results Between the Independent Variables and the Mentors' Perceptions of the Strength of the Mentoring Relationship (N = 125)

Independent Variable	r	r^2	F	p
Mentoring Potential	.50	.25	41.18	.000
Professional Success	.27	.07	9.18	.002
Immediate Organizational Climate	-.05	.00	.37	.55
General Organizational Climate	.08	.01	.73	.40
Experience as a Mentee	-.07	.00	.58	.45

Table 4

Correlations Among Mentoring Potential (MP), Professional Success (PS), Immediate Organizational Climate (IOC), General Organizational Climate (GOC), and Experience as a Mentee (EM) (N = 125)

Variable	MP	PS	IOC	GOC
PS	.49***			
IOC	.11	.07		
GOC	.06	.08	.18*	
EM	-.01	.07	-.01	-.06

* $p \leq .05$
** $p \leq .01$
*** $p \leq .001$

3. What is the overall relationship between the mentors' perceptions of the strength of the mentoring relationship and mentoring potential, professional success, immediate organizational climate, general organizational climate, and experienced as a mentee?

The overall relationship between the mentors' perceptions of the strength of the mentoring relationship and mentoring potential (X_1), professional success (X_2), immediate organizational climate (X_3), general organizational climate (X_4), and experience as a mentee (X_5) was analyzed with the SPSS^x Regression program with the screening sample of 75 subjects. Since the purpose of this analysis was explanatory, all independent variables were entered into the equation, regardless of their significance levels. The results generated the following regression equation:

$$Y' = 76.78 + .35X_1 + .02X_2 + (-.17)X_3 + .09X_4 + .55X_5$$

Inspection of the multiple regression output indicated that the independent variables explained 22% of the variance in the mentors' perceptions of the strength of the mentoring relationship, although mentoring potential was the only significant one ($R = .43$, R squared $= .18$, $p \leq .002$) (see Table 5). The remaining variables entered into the regression equation did not significantly improve the R squared.

Pedhazur (1982) stated that criteria to determine the best variables to remain in a multiple regression equation

Table 5

Multiple Regression Results Between the Independent Variables and the Mentors' Perceptions of the Strength of the Mentoring Relationship (n = 75)

Variable	R	R^2	F Change	p Change	Adj. R^2	b	Beta	F	p
MP	.43	.18	16.24	.000	.17	.35	.43	10.39	.002
IOC	.46	.21	2.43	.12	.19	-.17	-.18	2.62	.110
GOC	.46	.22	.55	.46	.18	.09	.08	.51	.478
PS	.46	.22	.06	.82	.17	.02	.03	.04	.835
EM	.46	.22	.04	.85	.16	.55	.02	.04	.852
Constant		76.78						33.11	.000

NOTE: MP = mentoring potential
IOC = immediate organizational climate
GOC = general organizational climate
PS = professional success
EM = experience as a mentee

include meaningfulness of the increase in R squared, statistical significance, or a combination of both. Since the increase in R squared was not meaningful and there was no statistical significance for the inclusion of any variable other than mentoring potential, a bivariate regression equation was generated with the following equation:

$$Y' = 74.47 + .35X$$

4. What is the relationship between the predicted and actual scores for the mentor's perception of the strength of the mentoring relationship?

The relationship between predicted and actual scores for the mentor's perception of the strength of the mentoring relationship was tested with the SPSS^{x} Correlation program on the calibration sample with 50 subjects. Two prediction scores were utilized: one from the multiple and one from the bivariate regression equation. Results indicated a correlation coefficient of .55 ($p < .000$) with the multiple regression equation and .58 ($p < .000$) with the bivariate regression equation.

Pedhazur (1982) stated that the correlation coefficient between the predicted and actual scores in the calibration sample will almost always be smaller than the multiple correlation coefficient in the screening sample for which the regression weights were originally calculated. The results from this study indicated the opposite. The correlation coefficients between the predicted and actual

scores in the calibration sample was greater than the .46 ($p < .000$) multiple correlation coefficient with the screening sample. These results suggested that the correlation coefficient in the calibration sample was overestimated by the smaller sample size.

5. What are key variables that facilitate strong mentoring relationships?

Demographic and qualitative data from the 125 subjects were inspected to identify key variables that facilitated strong mentoring relationships. Pearson correlation coefficients between the demographic variables and the dependent variable, strength of mentoring relationships did not reveal any significant ($p < .05$) correlations. Demographic variables were also correlated with the independent variables (see Table 6). It is interesting to note that age, number of years as a registered nurse, number of years worked full time, highest degree earned, number of years worked in the position, and the number of years the relationship spanned were weakly but significantly correlated to mentoring potential. These same variables plus focus of the nursing position, number of mentees, and interest to mentor in the future were weakly but significantly correlated to professional success. Other weak but significant correlations were between the number of years worked part time and the immediate organizational climate, focus of nursing position and the general

Table 6

Correlation of Demographic Variables and Mentoring Potential, Professional Success, Immediate and General Organizational Climate, and Experience as a Mentee (N = 125)

Demographic Variable	Mentoring Potential r	Professional Success r	Immediate Org. Climate r	General Org. Climate r	Experience as a Mentee r
age	.24 **	.39 ***	-.05	-.12	.12
years an RN	.25 **	.39 ***	-.01	-.04	.01
years worked full time	.21 **	.29 ***	-.13	-.14	.03
years worked part time	.08	.13	.20 *	.12	-.02
highest degree earned	.19 *	.24 **	.04	.04	.01
focus of nursing position	.01	.17 *	-.13	-.18 *	-.01
years in position prior to relationship	.18 *	.32 ***	-.02	-.04	.03
currently a mentor	-.01	.07	-.02	-.06	.21 **
number of mentees	.12	.15 *	.00	.14	-.08
hope to be a mentor in the future	-.06	.19 *	.00	.00	-.04
years relationship spanned	.18*	.24 **	.07	.02	-.02

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

organizational climate, and currently a mentor and experience as a mentee.

Content analysis of responses to the question, "In your opinion, what are the key factors that facilitate a mentoring relationship?" suggested four categories: mentor characteristics, mentee characteristics, elements of the relationship, and organizational elements. These four categories supported the triadic relationship of social cognitive learning theory since mentee and mentor characteristics can be viewed as cognitive and other personal factors, elements of the relationship can be viewed as behavior, and organizational elements can be viewed as environmental events (see Table 7).

After the responses were coded into their appropriate categories, the four categories were compared for frequency of comments. The largest number of responses were listed under the cognitive and other personal factors with mentor characteristics (n = 138) and mentee characteristics (n = 47). Next were behavioral factors with mentoring relationship elements (n = 147), and environmental events with organizational elements had only 37 responses.

Waltz et al. (1984) recommended procedures for obtaining inter-rater and intra-rater reliability for qualitative data. Inter-rater reliability between a nurse knowledgeable about mentoring and the investigator was estimated. A random selection of 36 authentic verbalizations were written on individual index cards. The

Table 7

Authentic Verbalizations for Key Examples That Facilitate Mentoring Relationships

(N = 125)

ENVIRONMENTAL EVENTS	BEHAVIOR
Organizational Elements	**Mentoring Relationship Elements**
"flexibility of schedules and learning experience"	"mutual respect and trust"
"atmosphere that encourages consultation and collaboration"	"both committed to growth and the relationship"
"supportive hospital environment"	"agreement on goals"
Cognitive and Other Personal Factors	
Mentor Characteristics	**Mentee Characteristics**
"ability to guide without being too directive"	"willingness to be taught new information"
"willingness to listen, teach, and accept criticism"	"enthusiasm"
"expertise and joy of sharing and teaching"	"ability to tolerate critique of work"

rater was instructed to sort the cards under four headings: organizational elements, mentoring relationship elements, mentor characteristics, and mentee characteristics.

The frequency of agreement and disagreement was computed for each category. Kappa, total percentage, occurrence percentage, and nonoccurrence agreement were calculated as described by Topf (1986).

Kappa is a correlation-like measure that reflects formal reliability theory principles and is the proportion of events consistently classified in the same category by both raters (Waltz et al., 1984). Since percentage agreements are inflated by chance, Kappa was calculated since it controls for chance agreement by devaluing agreement at high or low frequencies (Topf, 1986). The results indicated strong inter-rater reliability with a Kappa of .92 for organizational elements, .86 for mentoring relationships elements, and .80 for mentor characteristics, and .84 for mentee characteristics. Percentage agreement results indicated that total percentage agreement ranged from 92% to 97%, occurrence percentage agreement ranged from 75% to 88%, and nonoccurrence percentage agreement ranged from 89% to 97%. These results met the 70% minimum although most met the 80% adequate and 90% good level (Topf, 1986).

Intra-rater reliability was also established. The investigator followed the same procedures as previously described, one month after the categorization had been

completed. There was complete agreement between both ratings.

Content validity was determined by computing a content validity index (CVI) as set forth by Waltz et al. (1984) with five nurses who were knowledgeable about mentoring. The results indicated a CVI of .97 for organizational elements, .98 for mentoring relationship elements, .97 for mentor characteristics, and 1.0 for mentee characteristics.

The most frequent mentor characteristics included communication skills, explicit or implicit knowledge of adult learning principles, and a willingness to mentor and share experience, knowledge, ideas, and goals. One subject commented that the mentor needs to recognize the mentee's ability and be willing to support and teach despite the fact that the mentee may/will ultimately perform beyond the mentor's level.

The most frequent mentee characteristic that facilitated mentoring relationships was the mentee's interest and willingness to learn. Other responses included mentee enthusiasm, professional commitment, intelligence, and openness. Responses also indicated that the mentee needed to have an ability to listen, tolerate critique of work, set goals, and work independently.

The most frequent element of the relationship that facilitated mentoring relationships was the importance of a mutual respect and trust between the mentee and mentor. Other responses included the need for both the mentee and

mentor to have similar and compatible values and beliefs about nursing, an open, honest relationship, and personalities that do not clash. The responses suggested the importance for a positive relationship between the two people.

The most frequent organizational element that facilitated mentoring relationships was the need to have time to be a mentor. The content analysis suggested that even in the presence of a potential mentor and mentee who are able to develop a relationship, the relationship cannot progress if there is not sufficient time for the process to unfold. Another consideration was physical proximity which could permit potential mentees to come in contact with potential mentors. This element is closely related to the time factor. For example, if the work load is so demanding that the experienced staff does not have time to teach the novices, mentoring will not occur. In addition, if the experienced nurses are frequently away from the work place because of organizational demands, their expertise will not be able to be shared with others even if they have the time and are willing to do so. The responses suggested that the environment needs to support mentoring relationships by permitting flexibility in time management, work schedules, and creating a climate that encourages consultation and collaboration.

When asked what made this mentoring relationship special, the subjects responded in a variety of ways. After

a content analysis of the responses, four categories emerged: mentee attributes, mentor activities and functions, mentee growth and development, and mentor benefits (see Table 8).

After the responses were coded, the four categories were compared for frequency of comments. The largest number of responses were listed under mentee attributes (n = 64), followed by mentor activities and functions (n = 35), mentee growth and development (n = 33), and mentor benefits (n = 23).

Inter-rater and intra-rater reliability and validity were established as previously described. Inter-rater results indicated that total percentage agreement ranged from 92% to 97%, occurrence percentage agreement ranged from 70% to 91%, and nonoccurrence percentage agreement ranged from 90% to 97%. Kappa values indicated a .92 for mentee attributes, .93 for mentor activities and functions, .77 for mentee growth and development, and .78 for mentor benefits. On several occasions the rater viewed mentee growth and development as a mentor benefit, which lowered the results and suggested overlap in the categories. The CVI was .96 for mentee attributes, .87 for mentor activities and functions, .84 for mentee growth and development, and .97 for mentor benefits.

Intra-rater reliability results suggested complete agreement for mentee attributes and mentor activities and functions. Complete agreement was not obtained for mentee

Table 8

Authentic Verbalizations for What Made This Relationship Special

Mentee Attributes	Mentor Activities and Functions
"her ability to process and catch on quickly"	"able to give her support and guidance"
"strong desire to learn"	"to help someone learn a role"
"thought provoking questions"	"identifying potential in the mentee"
Mentee Growth and Development	**Mentor Benefits**
"to watch her grow in knowledge, skills, and self-confidence"	"received fresh ideas for my program"
"to see a person develop a managerial thinking process"	"increased my own self-esteem for my own accomplishments"
"to watch her develop and take charge with acquired knowledge"	"it was gratifying to know that I had a positive effect on this person"

growth and development and mentor benefits. The results indicated a 97% total agreement, an 89% occurrence agreement, a 97% nonoccurrence agreement, and a .93 Kappa for mentee growth and development. Results for mentor activities and functions indicated a 97% total agreement, a 91% occurrence agreement, a 97% nonoccurrence agreement, and a .94 Kappa.

These results supported the authentic verbalization categories since the results met the minimum percentage agreement and indicated strong agreement from the Kappa and CVI values.

Mentee attributes that made this relationship meaningful to the mentor included qualities such as a desire, motivation and ability to learn, a willingness to listen, and an openness to new ideas. The most frequent response in this category was a willingness to learn. Mentors worked harder for bright, eager, enthusiastic, and motivated mentees.

The second largest category of responses that made the reported relationship special was the mentor's activities and functions. For example, being able to share experiences, knowledge, and understanding in a personal way was meaningful to a mentor. One respondent commented that this relationship created an opportunity for the "generativity of nurses in the profession," and another stated this relationship was a "change to give back to nursing some of the fulfillment it had given me."

The mentors also described that this particular relationship was meaningful because of the positive impact they had on the growth and development of a less experienced professional. For example, although the mentee's willingness to learn was important, as were the various mentor activities and functions, so was the opportunity to see "the joy of discovery and progress in the mentee." It was a meaningful and exciting experience to watch the mentee develop "into an assured, competent nurse." The mentee's growth and development seemed to stimulate and enhance the mentor's activities and functions.

The responses suggested that not only did the mentee benefit from the experience but so did the mentor. The relationships afforded the mentors an opportunity to learn since they were stimulated and challenged in their professional roles. The mentoring relationships "gave a sense of importance to my career." Another respondent stated, "My ego was rewarded by the relationship as was my professional desire to make a difference and advance the profession as a leader with human skills."

The content analysis suggested that a meaningful mentoring relationship is a complex, multi-dimensional experience. The mentee has certain attributes which enhances the mentor's activities and functions. The end product seems to be growth and development in both the mentee and mentor. The mentee learns needed knowledge and skills while the mentor is challenged to continue to develop

professionally. For the mentors, the experience can be gratifying and rewarding since they feel respected for their expertise and knowledge.

Discussion

Sample

To determine sample representativeness, demographic data were compared to national statistics on registered nurses and other mentoring research. Compared to the nursing population in the United States (U.S. Department of Health and Human Services, 1987), this sample was highly educated. Specifically, the estimated percent of nurses in the United States with a diploma or associate degree is approximately 66.4%, yet that group comprised only 4.8% of the study sample. In contrast, the percent of nurses in the United States with a master's degree or higher is 6.2% as compared to 80.8% of the study sample. The education level of the current sample did compare favorably with Novotny's (1983) mentors who were educated primarily at the master's and doctoral levels.

Surveys have suggested that mentored professionals are better educated than non-mentored professionals (Roche, 1979). In addition, those professionals who have been mentored, mentor others more frequently than professionals who have not been mentored (Busch, 1985; Spengler, 1982; White, 1988). It might be concluded from this data that if mentored professionals are better educated and more likely

to function as a mentor than non-mentored professionals, then mentors are better educated than non-mentors.

Research has also indicated that mentors are in higher positions than non-mentors (Zey, 1984). If education and administrative positions are considered higher than patient care positions, the current sample of mentors held higher positions than most nurses in the United States. For example, 66.8% of the national sample was involved in direct patient care, whereas only 23.2% were in this sample. The national sample had only 17.5% in administrative positions and 4.4% in education positions as compared to 23.2% and 44.2%, respectively, for the study sample.

Another consideration in determining sample representativeness was comparison of the length of the mentoring relationships to other mentoring research. The length of the current sample's mentoring relationships ranged from 1 to 20 years (M = 3.7, SD = 3.07) with 71.7% lasting 3 years or less. These results suggested shorter mentor relationships than those reported by other nurses. For example, Spengler (1982) reported that only 23% of the relationships spanned less than 3 years and 22% spanned 4 to 6 years. Although Novotny (1983) reported shorter relationships than Spengler, they were not as short as this investigation. An explanation for this discrepancy might be the wording of the questions. Subjects were asked to identify the calendar year or years that the relationships

occurred. It was not possible to determine how many of the relationships were ongoing and how many had ended in 1989.

Although the sample responded that they had a range of 1 to 75 mentees (M = 8.5, Mdn = 5, SD = 11.7) during their career, data were collected on only their strongest mentoring relationships. These relationships began 1 to 25 years ago (M = 6.1, Mdn = 5, SD = 4.6) and spanned 1 to 20 years (M = 3.1, Mdn = 2, SD = 3.1). The reported relationships did seem representative of mentoring relationships in nursing. For example, mentee and mentor attributes emerged as the major variables that made the relationship meaningful. Since mentoring is a dynamic personal relationship, it seemed logical that the two people involved would emerge as major variables affecting the significance of the relationship. Since a major function of a mentor is to be a role model, inspirer, teacher, and guide (Darling, 1984; Vance, 1982), it also seemed logical that the mentor would feel rewarded by the growth and development in the mentee. If the mentor enjoyed mentoring, the product of the process would be a benefit and hence a variable in making the relationship meaningful.

It can be concluded that these mentors and the perceptions of their strongest mentoring relationships were representative of mentors and mentoring relationships in nursing. The educational level and professional positions were comparable to other mentor descriptions. In addition,

the descriptions of their relationships suggested that they were describing a mentoring relationship.

Research Findings

The conceptual model proposed for this investigation suggested that personal variables (mentoring potential, professional success, and experience as a mentee) and organizational variables (immediate and general organizational climate) were related to the strength of mentoring relationships. This model was supported by research and social cognitive learning theory in that there is a triadic relationship among environmental events, cognitive and other personal variables, and behavior.

Individual relationships between the independent variables (mentoring potential, professional success, immediate and general organizational climate, and experience as a mentee) and the dependent variable (strength of the mentoring relationship) suggested that only mentoring potential and professional success were related to the dependent variable. Multiple regression analysis and cross validation supported only the relationship between mentoring potential and the strength of mentoring relationships (see Figure 2).

A post hoc analysis for statistical differences between the entire sample of 125 and the screening sample of 75 was conducted to determine significant differences ($p \leq .05$) between the multiple correlations and standard error values.

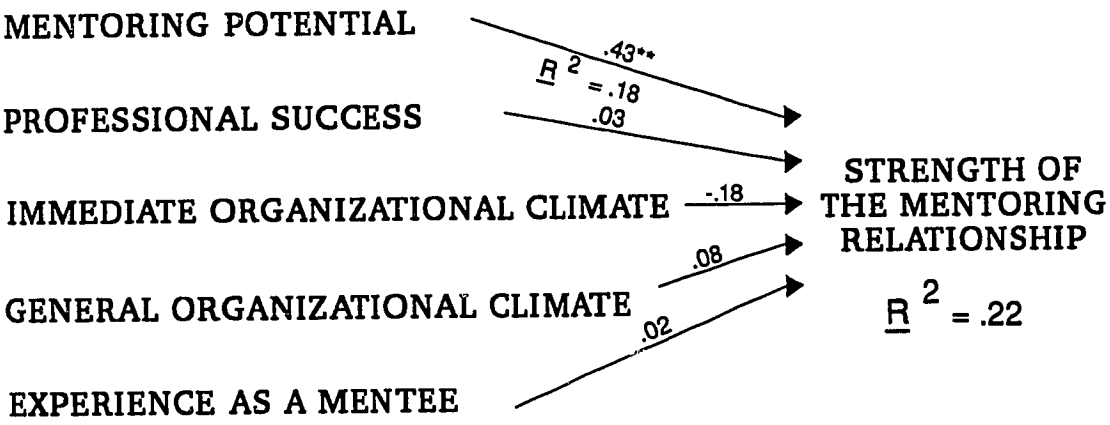

Figure 2. Results of Model Testing with Beta Weights.

The results indicated no significant differences between the two samples. These results in addition to the post hoc power analysis on the screening sample supported the decision to use the screening sample to establish the relationship between the independent and dependent variables.

Although mentoring potential was the only significant variable, it accounted for 18% of the variance in the strength of the mentoring relationship. It is recommended that other independent variables and improved instruments be developed to improve the model's explanatory power.

The instruments in this investigation had not been widely used or tested. Jennings and Rogers (1989) stated that confidence in regression analysis findings is derived from the reliability and validity of the instruments used and assurance that the mathematical assumptions for the statistical tests were not violated. They recommended a reliability coefficient of at least .80 on the study sample to ensure theoretical model testing sensitivity. In this study the reliability coefficients ranged from .82 for the Career Support Scale which tested the strength of the mentoring relationship to .92 for the Work Environment Support Scale for the immediate organizational climate and the Mentoring Potential Scale. Although the study instruments meet the minimum standards for reliability, they have not been used in multiple studies which would strengthen the reliability evaluation.

Pedhazur (1982) stated that knowledge on the effects of measurement error on regression statistics is rudimentary. However, measurement errors may occur from unreliable instruments which introduce a downward bias in the estimation of the multiple regression coefficients. This bias can be controlled with reliable instruments and low correlations among the independent variables. This study suggested relatively low multiple regression coefficients although instrument reliability was adequate and multicollinearity did not pose a problem. It might be concluded that the model did not identify adequate independent variables or the instruments used were inadequate. Future research and further instrument development is needed to fully evaluate the model and regression results.

Specifically, new organizational climate instruments sensitive to mentoring relationships need to be developed. Although organizational climate was not supported in the regression analysis, it did emerge as a variable that facilitated mentoring relationships in the content analysis. These data suggested that available time, scheduling flexibility, and a collaborative climate were essential elements in creating an environment conducive to mentoring. Although the Work Environment Scale addressed organizational climate, it did not specifically address these issues. A more sensitive organizational climate instrument is needed

to measure the relationship between organizational climate and the strength of mentoring relationships.

It might be premature to delete organizational climate from the model since research has suggested that the open climate described by Halpin and Croft (1962) is more conducive to mentoring relationships than an autonomous, controlled, familiar, paternal, or closed climate. Mentoring research in nursing also has suggested that the organizational climate effects the presence of mentoring relationships (Hardy, 1984). The current investigation made the assumption that if organizational climate is related to the frequency of mentoring relationships, it might also be related to the strength of mentoring relationships. Social cognitive learning theory also supported the relationship between organizational climate and the strength of the mentoring relationships. More research is needed to determine the relationship between organizational climate and mentoring relationships.

The bivariate regression analysis suggested that professional success explained some of the variance in the strength of mentoring relationships, but this relationship was not supported in the multiple regression analysis. It is possible that professional success might have an indirect effect on the strength of the mentoring relationship through mentoring potential. This conclusion is supported by previous work which identified professional success as an antecedent for being a mentor (Dalton & Thompson, 1986;

Fields, 1988a). Future investigations are needed to clarify these relationships.

Neither quantitative nor qualitative data suggested that experience as a mentee was related to the strength of mentoring relationships, although previous research identified that professionals who had been mentored were more likely to mentor others than their non-mentored counterparts (Busch, 1985; Hess, 1986; Spengler, 1982). Results from this study did not support inclusion of experience as a mentee in the model. Perhaps experience as a mentee is related to becoming a mentor, but once a person is a mentor, the strength of the relationship is dependent on other variables.

The discussion thus far has not included the mentee's contribution to the strength of mentoring relationships. The qualitative analysis suggested that mentee attributes are a variable in the strength of mentoring relationships. Since mentoring is a dynamic relationship between two people, it is logical to consider both individuals' effect on the outcome. Therefore, a more comprehensive model suggested by this investigation includes cognitive and other personal variables of the mentee as additional variables.

Conclusions

Bivariate correlations suggested that mentoring potential and professional success were significantly related to the mentors' perceptions of the strength of the

mentoring relationships. Multiple regression results suggested that only mentoring potential significantly explained the variance in the mentors' perceptions of the strength of the mentoring relationship. Multiple regression results were supported with the cross-validation procedure. It is recommended that a revised conceptual model be developed and tested. This model would evaluate the relationship between professional success and mentoring potential, so that their relationship to the strength of mentoring relationships could be more completely assessed. It is suggested that other independent variables include organizational climate and cognitive and other personal variables of the mentee. Improved measurement of organizational climate and the addition of mentee attributes in the model might explain more of the variance in the dependent variable, strength of the mentoring relationship.

CHAPTER V

SUMMARY AND IMPLICATIONS

This chapter includes a summary of the research findings and implications for nursing research, clinical and administrative practice, and education.

Summary

A conceptual model, developed from social cognitive learning theory (Bandura, 1986) and mentoring research, related the mentors' perceptions of the strength of their strongest mentoring relationship to mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee. This model was tested on 125 recruited mentors in nursing who were randomly divided into two groups: a screening sample of 75 to generate the multiple regression equation and a calibration sample of 50 to cross validate the regression equation.

This study addressed the following research questions:

1. What are the individual relationships between the mentors' perceptions of the strength of the mentoring relationship and mentoring potential, professional success,

immediate organizational climate, general organizational climate, and experience as a mentee?

2. What are the relationships among the mentors' perceptions of mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee?

3. What is the overall relationship between the mentors' perceptions of the strength of the mentoring relationship and mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee?

4. What is the relationship between the predicted and actual scores for the mentor's perception of the strength of the mentoring relationship?

5. What are key variables that facilitate strong mentoring relationships?

A mentor was defined as someone who guided, taught, coached, and counselled a less experienced nurse over a period of time in a mentoring relationship that developed either informally or in an assigned situation. The strength of the mentoring relationship was tested with the Career Support Scale, mentoring potential was tested with the Mentoring Potential Scale, professional success was tested with the Self-Perceived Success in Nursing Scale, immediate and general organizational climate were tested with the Work Environment Support Scale, and experience as a mentee was surveyed through the Demographic Questionnaire.

Research questions one, two, and five were answered with data from the entire recruited sample of 125 mentors, research question three was answered with data from the screening sample of 75 mentors, and research question four was answered with data from the calibration sample of 50 mentors.

Quantitative data were analyzed on a Vax computer with the SPSS^{x} Correlation and Regression programs. A post hoc analysis for statistical differences between the multiple regression results with the entire sample of 125 and screening sample of 75 indicated no significant differences. In addition, a post hoc power analyses supported the adequacy of the screening and calibration sample sizes. Qualitative data were analyzed with a content analysis procedure which was also tested for reliability and validity.

Bivariate regression analysis between each of the independent variables (mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee) and the mentors' perceptions of the strength of the mentoring relationship indicated that both professional success and mentoring potential significantly explained a portion of the variance in the strength of the mentoring relationship. However, multiple regression analysis and cross validation supported inclusion of only mentoring potential, and not professional success, in the conceptual model.

A bivariate correlation matrix among the independent variables suggested that professional success and mentoring potential were significantly correlated with each other. It was concluded that professional success might be indirectly related to the strength of the mentoring relationship through mentoring potential since professional success was significantly correlated with both mentoring potential and the strength of the mentoring relationship. Furthermore, the strength of these relationships was stronger between professional success and mentoring potential than it was between professional success and the strength of the mentoring relationship. Therefore, although professional success did not seem to have a direct, multivariate relationship with the strength of the mentoring relationship, it was concluded that perhaps there was an indirect relationship through mentoring potential.

A content analysis of the qualitative results supported inclusion of mentoring potential and organizational climate in the conceptual model, plus an additional independent variable mentee attributes. Therefore, integration of the quantitative and qualitative results suggested a revised conceptual model for future investigation with the following independent variables: professional success, mentoring potential, organizational climate, and mentee attributes.

Implications

Nursing Research

The results from the current investigation suggested a revised conceptual model for future research. It is recommended that definitional issues between mentoring and other career relationships and further instrument development be conducted prior to model testing.

Definitional issues can be addressed through observations and interviews with exemplary mentoring dyads. The results of this research will help identify characteristics of mentoring relationships, mentors, mentees, and the organization in which they practice. This data could then be compared to other career relationships to aid future instrument development that discriminates between mentoring and other career relationships. The resultant instruments could then be utilized to test the revised conceptual model from the current investigation.

The results of the current investigation suggested that instruments more specific to mentoring might have yielded different results. Specifically, although the multiple regression results did not support organizational climate as an independent variable in the conceptual model, the qualitative data did support its inclusion. The Work Environment Scale, which was used to measure both the immediate and general organizational climate, addressed psychosocial aspects of organizational climate, but not

other issues such as schedule flexibility and time availability for mentoring relationships. In addition, although mentee attributes emerged as an independent variable from the qualitative data, no instruments are known that measure it.

Although the current study added to the knowledge foundation on mentoring in nursing, future investigations are recommended to refine the definition of mentoring in nursing and develop instruments that measure variables related to mentoring relationships. The results of these studies can be used to test conceptual models on mentoring to help determine if mentoring is a catchy buzzword and fad or a desirable process to be encouraged.

Clinical and Administrative Practice

The results of this investigation suggested that mentoring relationships exist in nursing practice. In addition, the mentors expounded on what they felt made a specific relationship meaningful and identified key variables that facilitated mentoring relationships.

Prospective mentees in new positions can utilize these results to sensitize themselves to mentoring relationships and identify behaviors in themselves that facilitate mentoring relationships. For example, the results suggested that the mentee needs to be interested and motivated to learn from the mentor. Mentors desire enthusiastic, honest, and caring nurses who have the potential for professional

growth. Nurses in new positions who desire a mentor may want to incorporate these behaviors into their repertoire.

Experienced nurses who are in a position to mentor less experienced nurses can utilize the results from this study by being receptive to opportunities to mentor other nurses. In addition, mentor characteristics emerged as variables that facilitated mentoring relationships. Therefore, potential mentors could try to incorporate these behaviors into their repertoire to make themselves more desirable to potential mentees.

The results of this study also have implications for nursing and hospital administration since organizational elements emerged as elements that facilitated mentoring relationships. Specifically, the results suggested that mentoring relationships are facilitated when nurses have time and flexibility to engage in relationships with a supportive hospital environment that encourages consultation and collaboration.

Mentoring relationships can be facilitated through preceptor programs. Preceptor programs enable an experienced nurse to work closely with a less experienced nurse over time. A mentoring relationship might develop through this assigned relationship. Preceptor program coordinators need to educate staff about the concepts of mentoring relationships, so they can seize the opportunity to mentor and be mentored.

Preceptor programs need not be limited to new graduates or new employees. These programs are also appropriate for newly promoted personnel. For example, a newly promoted administrative nurse would benefit from a preceptor to help with role transition issues.

A distinction is made between preceptor and mentoring relationships. A preceptor relationship is a formal, assigned relationship with formalized goals and objectives between an experience nurse and an inexperienced one. A mentoring relationship often develops from preceptor relationships as the relationship deepens and becomes more personal. It is the depth and character of the two relationships that differ. Both occur between a more experienced and less experienced professional, both provide guidance and learning for the less experienced professional, and both are one to one relationships. Mentoring relationships are defined not only by the formal roles ascribed to them but also by the character and function of the relationship (Levinson, 1978).

Nursing Education

The results of this investigation also have implications for nursing education at the generic, graduate, and continuing education level. Although instructors cannot be mentors to all students, they can incorporate elements of mentoring into their teaching philosophy and be sensitive to opportunities to mentor students. In addition, concepts of

mentoring can be incorporated into leadership and management classes to educate students about mentoring. Students can be taught the benefits of mentoring and how to find a mentor. Educational institutions are excellent forums for developing mentoring relationships because of the close interaction between faculty and students over an extended period of time. Faculty have the experience and knowledge base that needs to be shared with their less experienced students.

Conclusions

This investigation proposed and tested a conceptual mode that related the mentors' perceptions of the strength of the mentoring relationship to mentoring potential, professional success, immediate organizational climate, general organizational climate, and experience as a mentee. The results supported only the relationship between mentoring potential and the strength of the mentoring relationship. Analysis of the quantitative and qualitative data suggested a revised model with professional success, mentoring potential, organizational climate, and mentee attributes as the independent variables; and strength of the mentoring relationship as the dependent variable.

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APPENDICES

APPENDIX A

WRITTEN NOTICE FOR RECRUITING SUBJECTS

SUBJECTS NEEDED FOR DOCTORAL DISSERTATION

WANTED:	FEMALE REGISTERED NURSES TO PARTICIPATE IN A STUDY ON MENTORING IN NURSING.
PURPOSE OF STUDY:	TO EXAMINE THE PERSONAL AND ORGANIZATIONAL FACTORS RELATED TO MENTORING RELATIONSHIPS.
WHY VOLUNTEER?	TO PROVIDE VALUABLE INFORMATION ABOUT MENTORING WHICH COULD ENHANCE MENTORING RELATIONSHIPS AND PROMOTE THE GROWTH AND DEVELOPMENT OF ASPIRING, CREATIVE NURSES.
COMMITMENT:	COMPLETE A ONE-TIME MAILED SURVEY THAT WILL TAKE 15 TO 30 MINUTES.
QUALIFICATIONS:	FEMALE REGISTERED NURSES WHO ARE OR WERE A MENTOR. YOU WERE A MENTOR IF YOU GUIDED, TAUGHT, COACHED, AND/OR COUNSELLED A LESS EXPERIENCED NURSE OVER A PERIOD OF TIME. SOME MENTORING RELATIONSHIPS DEVELOP INFORMALLY, WHILE OTHERS BEGIN AS AN ASSIGNED RELATIONSHIP.
WHAT NOW?	IF YOU THINK YOU FUNCTIONED AS A MENTOR TO AT LEAST ONE NURSE, RETURN THE ATTACHED, STAMPED POSTCARD WITH YOUR NAME, ADDRESS, AND PHONE NUMBER TO RECEIVE THE RESEARCH PACKET. IF YOU KNOW A NURSE WHO WAS A MENTOR, PLEASE HAVE THEM CONTACT ME.
QUESTIONS?	CONTACT: WILLA FIELDS, DNSc (cand), RN UNIVERSITY OF SAN DIEGO PHILIP Y. HAHN SCHOOL OF NURSING ALCALA PARK SAN DIEGO, CA 92110 (619) 756-5642

YES! I AM INTERESTED IN PARTICIPATING IN YOUR DISSERTATION ON MENTORING

NAME (PLEASE PRINT): _____

ADDRESS: _____

_____

PHONE NUMBER: _____

THANK YOU!

WILLA FIELDS, DNSc (cand), RN
UNIVERSITY OF SAN DIEGO

APPENDIX B

COVER LETTER

P.O. Box 563
Rancho Santa Fe, CA 92067

Date:

Dear Colleague:

Thank you for responding to my notice for mentors.

I am currently conducting a study on mentoring for my doctoral dissertation at the University of San Diego School of Nursing. Mentoring is important to us as nurses since it is a process that develops successful, satisfied professionals. You are indeed fortunate to have experienced this relationship.

The purpose of my study is to examine the mentor's perceptions of personal and organizational factors related to the strength of mentoring relationships. I would appreciate it if you would agree to participate in my study. It will take you approximately 15 to 30 minutes to complete the questionnaires, and they can be returned in the attached, stamped, addressed envelope.

Enclosed is a demographic questionnaire and four scales (Work Environment Support Scale, Self-Perceived Success in Nursing Scale, Mentoring Potential Scale, and Career Support Scale).

When completing the demographic questionnaire and scales, think of everyone for whom you functioned as a mentor. Then choose the relationship that you feel was the strongest and answer all questions for that same relationship.

Please note: If this is a current relationship, complete the scales for your current situation. If this relationship occurred in the past, complete the scales for that time in your career.

Please be assured that your responses will remain completely anonymous. Please sign and return the enclosed consent form and other materials by _____ so your input can be included in the results.

I realize that your participation requires an investment of your good will and time. However, by participating, you will be instrumental in providing valuable information about mentoring which could help our profession promote the growth and development of aspiring, creative, professionals.

If you have any questions, please call me at (619) 756-5642 or write to me at the above address.

Thank you for helping me with my research.

Sincerely,

Willa Fields, DNSc (Candidate)

APPENDIX C

INFORMED CONSENT FORM

UNIVERSITY OF SAN DIEGO

SCHOOL OF NURSING

I give permission for Willa Fields, a doctoral candidate in the School of Nursing at the University of San Diego, to use my demographic data and results from the Mentoring Potential Scale, Work Environment Support Scale, Career Support Scale, and Self-Perceived Success in Nursing Scale to examine mentoring in nursing.

The results of this study will provide information about mentoring in nursing. These results will provide needed information to enhance mentoring relationships in nursing.

I understand that my participation is completely voluntary, and I may withdraw from the study at any time. I will receive no compensation, financial or otherwise, and there are no physical, social, or psychological risks involved.

There was the opportunity to ask questions about the study prior to signing this form.

I understand the testing time is approximately 15-30 minutes.

I understand that the information collected will be anonymous.

There is no agreement between myself and the researcher, written or verbal, beyond that expressed on this consent form.

I, the undersigned, understand the above explanations and, on that basis, I give consent to my voluntary participation in this research.

_____ _____

Signature of Subject Date

_____

Location (e.g., San Diego, CA)

_____ _____

Signature of Researcher Date

_____ _____

Signature of Witness Date

APPENDIX D

DEMOGRAPHIC QUESTIONNAIRE

DEMOGRAPHIC DATA

Please answer the following questions in the appropriate space.

1. Age: _____

2. How many years have you been a Registered Nurse? _____

3. How many years have you worked as a Registered Nurse?
_____ years full time _____ years part time

4. What was your original nursing program?
( ) Diploma
( ) Associate degree
( ) BSN
( ) ND (Nursing doctorate)

5. What is your highest degree earned?
( ) Diploma
( ) Associate Degree
( ) BSN
( ) MSN
( ) DNS/PhD
( ) Other, please specify _____

A mentoring relationship is a special relationship between two adults, with the more experienced one taking a personal interest in and guiding the less experienced person's career. The mentor has the qualities and knowledge that the mentee wants to acquire, and the mentee is one in whom the mentor has great expectations for success. For questions 6, 7, 8, & 9 think of everyone for whom you functioned as a mentor. Then choose the relationship that you feel was the strongest, and answer the questions.

6. In a few sentences describe what made this mentoring relationship meaningful.

7. What is/was the primary focus of your position during your strongest mentoring relationships?
( ) Patient care
( ) Patient education
( ) Staff education
( ) Student education
( ) Administration
( ) Research
( ) Other, please specify _____

8. How many years were you/have you been in this position?

_____

9. What type of facility do you/did you work in during your strongest mentoring relationship?
( ) Public acute care hospital
( ) Private acute care hospital
( ) Government acute care hospital
( ) Outpatient facility
( ) Skilled nursing facility
( ) Psychiatric hospital
( ) School of Nursing
( ) Other, please specify _____

10. Do you currently have a mentor?
( ) Yes
( ) No

11. Have you ever had a mentor?
( ) Yes
( ) No

12. How many mentees have you had? _____

13. Are you currently a mentor?
( ) Yes
( ) No

14. Do you hope to be a mentor in the future?
( ) Yes
( ) No

15. Do you feel you have the time to be in a mentoring relationship?
( ) Yes
( ) No

In order to gain more specific information about mentoring relationships in nursing, please answer the following questions.

16. In your opinion what are the key factors that facilitate a mentoring relationship?

17. In your opinion what are the critical predictors for being a mentor?

18. In your opinion what are the key factors in your current organization that enhance mentoring relationships?

19. In your opinion what are the key factors in your current organization that inhibit mentoring relationships?

APPENDIX E

MENTORING POTENTIAL SCALE

MENTORING POTENTIAL SCALE

Directions: Circle the appropriate number from 1 (not very descriptive) to 5 (very descriptive) to indicate how you think other people would have described you during your strongest mentoring relationship.

		Not Very Descriptive				Very Descriptive
1.	easily approachable	1	2	3	4	5
2.	supportive of others	1	2	3	4	5
3.	secure	1	2	3	4	5
4.	interested in others	1	2	3	4	5
5.	nurturing person	1	2	3	4	5
6.	anxiety producing	1	2	3	4	5
7.	teacher	1	2	3	4	5
8.	successful	1	2	3	4	5
9.	powerful	1	2	3	4	5
10.	respected by colleagues	1	2	3	4	5
11.	respected by superiors	1	2	3	4	5
12.	knowledgeable	1	2	3	4	5
13.	skilled	1	2	3	4	5
14.	manipulative	1	2	3	4	5
15.	good interpersonal skills	1	2	3	4	5
16.	good communication skills	1	2	3	4	5
17.	motivate growth in others	1	2	3	4	5
18.	interested in furthering development of others	1	2	3	4	5
19.	encourage dependency	1	2	3	4	5
20.	share ideas	1	2	3	4	5
21.	willing to admit deficits	1	2	3	4	5
22.	high self-esteem	1	2	3	4	5
23.	collaborator	1	2	3	4	5
24.	positive self-concept	1	2	3	4	5
25.	allow and encourage freedom of expression	1	2	3	4	5
26.	patient	1	2	3	4	5
27.	demand loyalty from others	1	2	3	4	5
28.	empathic	1	2	3	4	5
29.	sensitive to needs of others	1	2	3	4	5
30.	compliment others for their accomplishments	1	2	3	4	5
31.	provide moral support to others	1	2	3	4	5
32.	threatened by accomplishments of others	1	2	3	4	5
33.	caring person	1	2	3	4	5
34.	experienced	1	2	3	4	5
35.	guide others	1	2	3	4	5

APPENDIX F

SELF-PERCEIVED SUCCESS IN NURSING SCALE

APPENDIX G

WORK ENVIRONMENT SUPPORT SCALE

APPENDIX H

CAREER SUPPORT SCALE: MENTOR VERSION